

Virginia Water Supply Planning and Advisory Committee

Virginia Water Resource Planning: Balancing Law, Policy and Demand

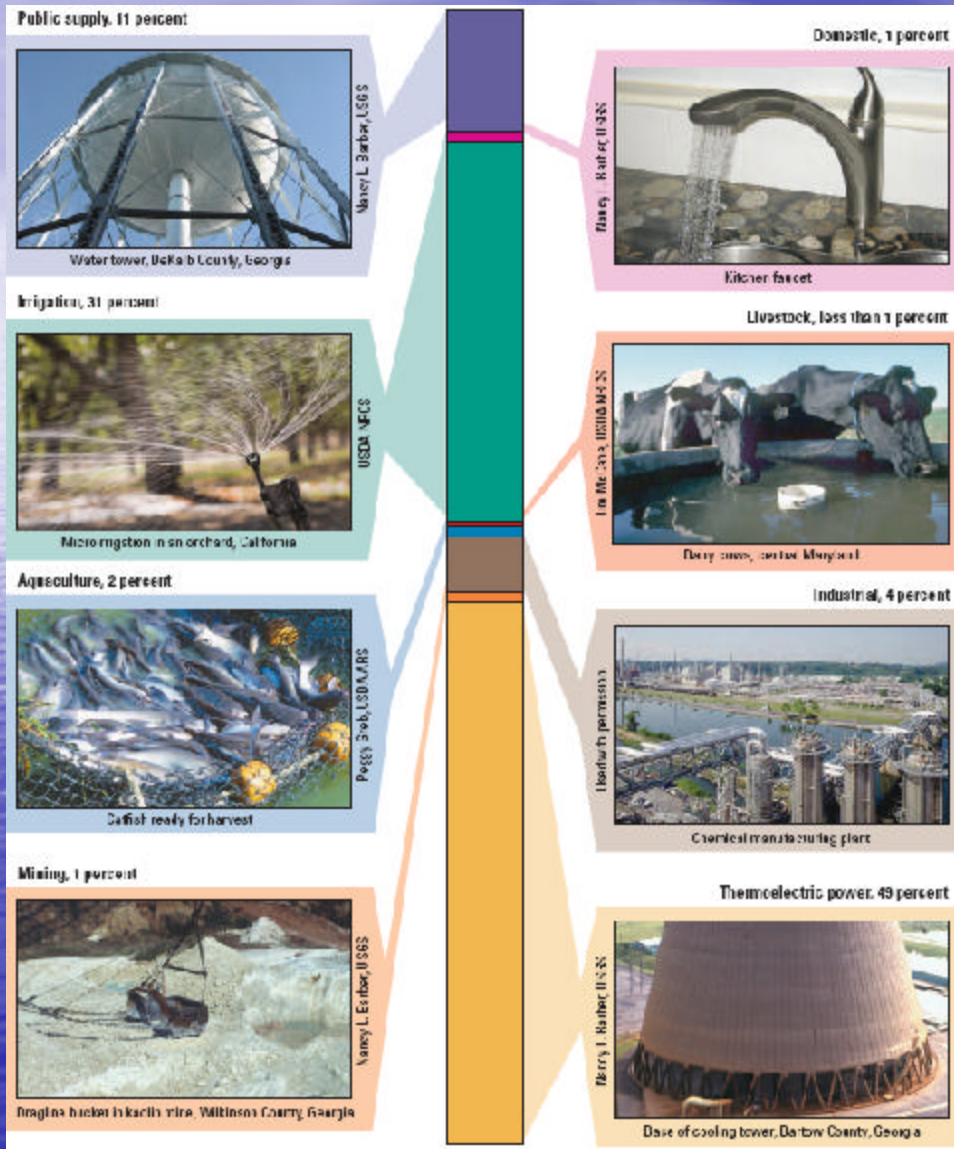
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Overview

- Water Use in Virginia
Is use of the resource sustainable?
- A Short History of Virginia Common Law
How did we get here?
- Current Water Regulation in Virginia
Will our legal framework support future needs?

Water Use (Data and Trends)



National Water Use Data

410.0B gal/d for all sectors

349.0B gal/d of fresh water

61.0B gal/d of saline water

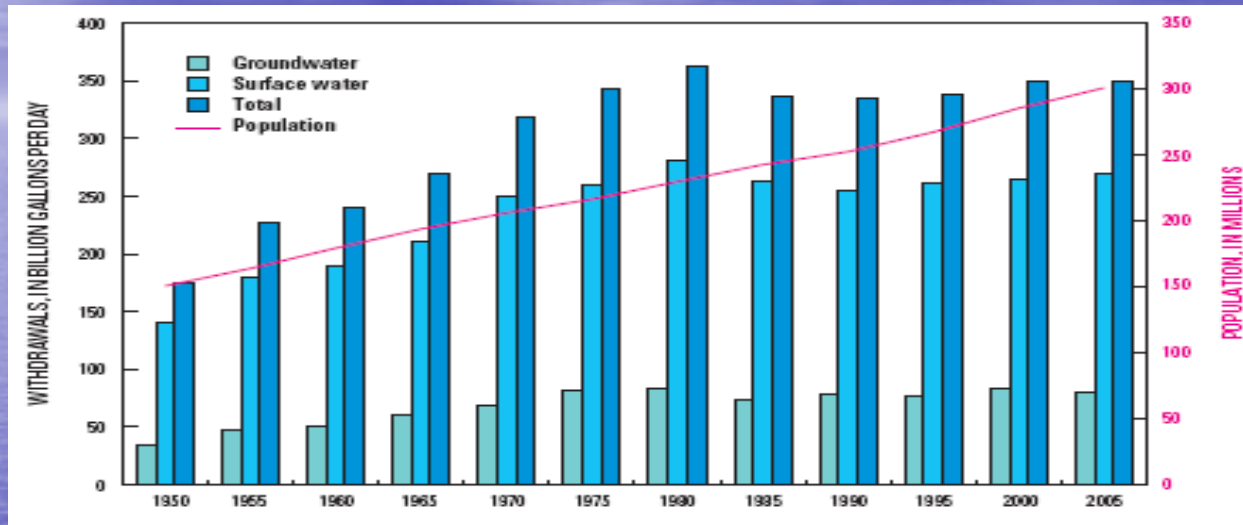
Virginia Water Use Data

10.6B gal/d for all sectors

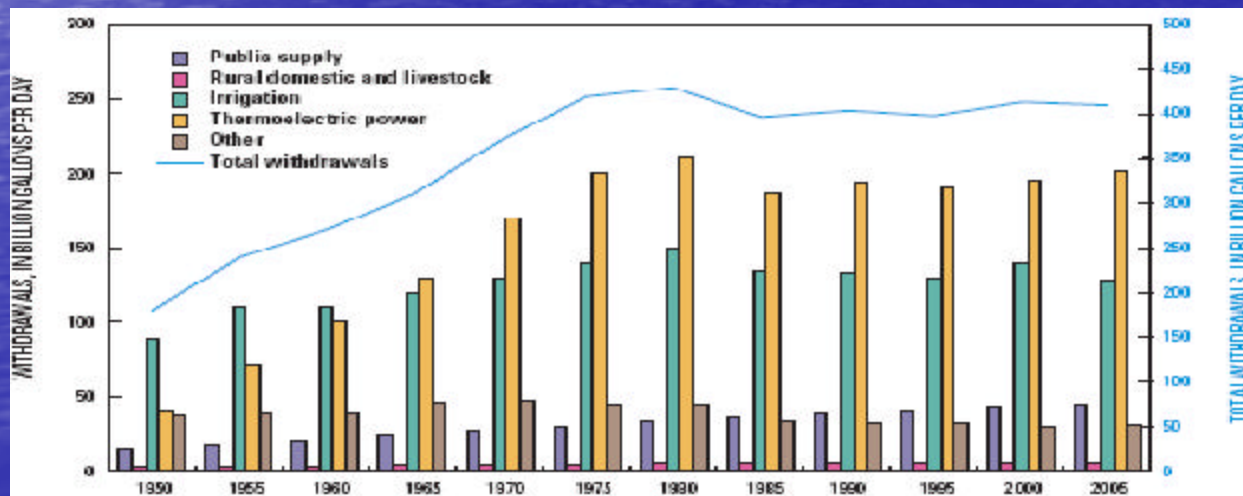
7.08B gal/d of fresh water

3.52B gal/d of saline water

Water Use (Data and Trends)

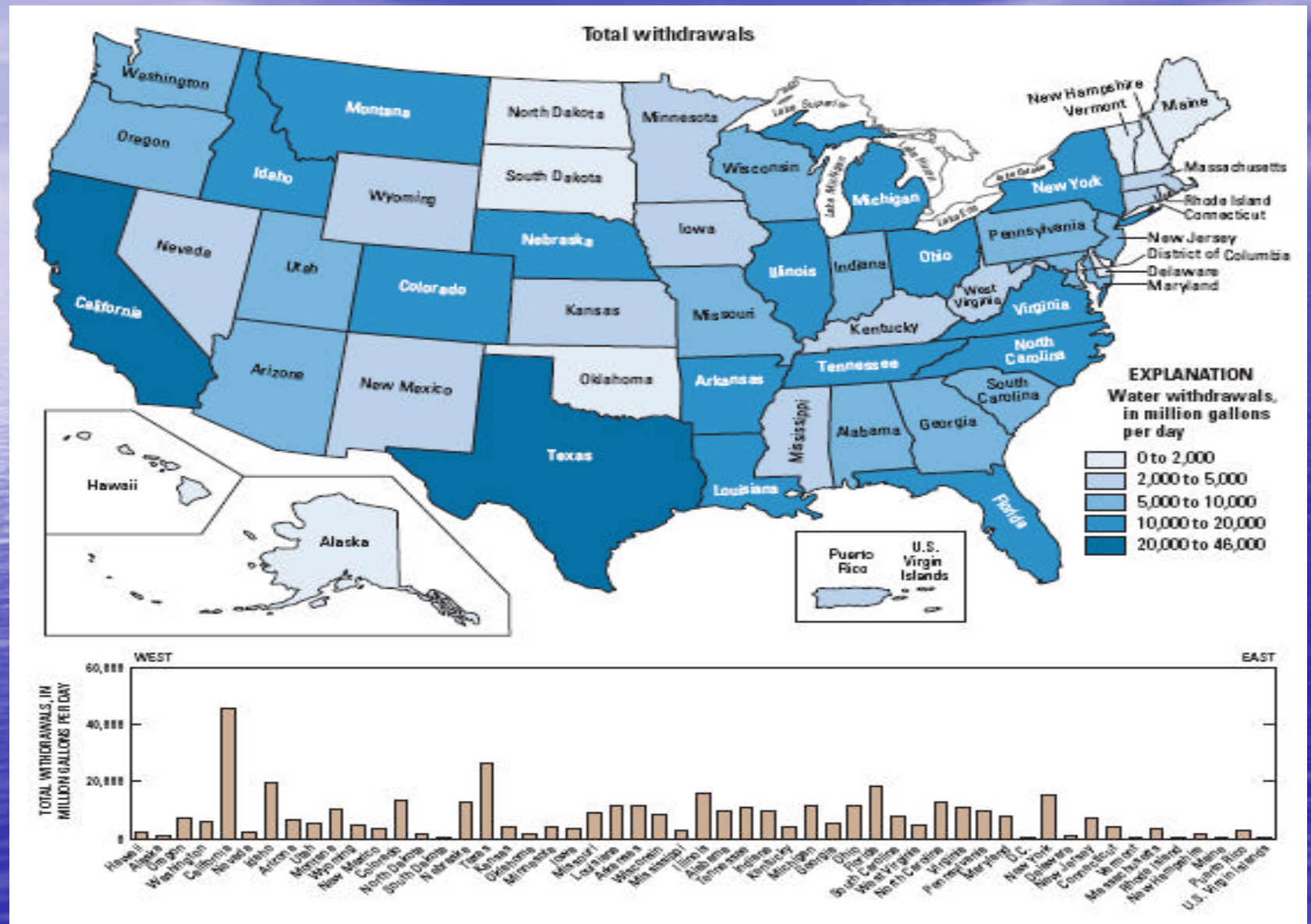


Trends in freshwater withdrawals by source, U.S. Geological Service (2005)



Trends in total water withdrawals by sector, U.S. Geological Service (2005)

Water Use (Data and Trends)



Water Use (Data and Trends)

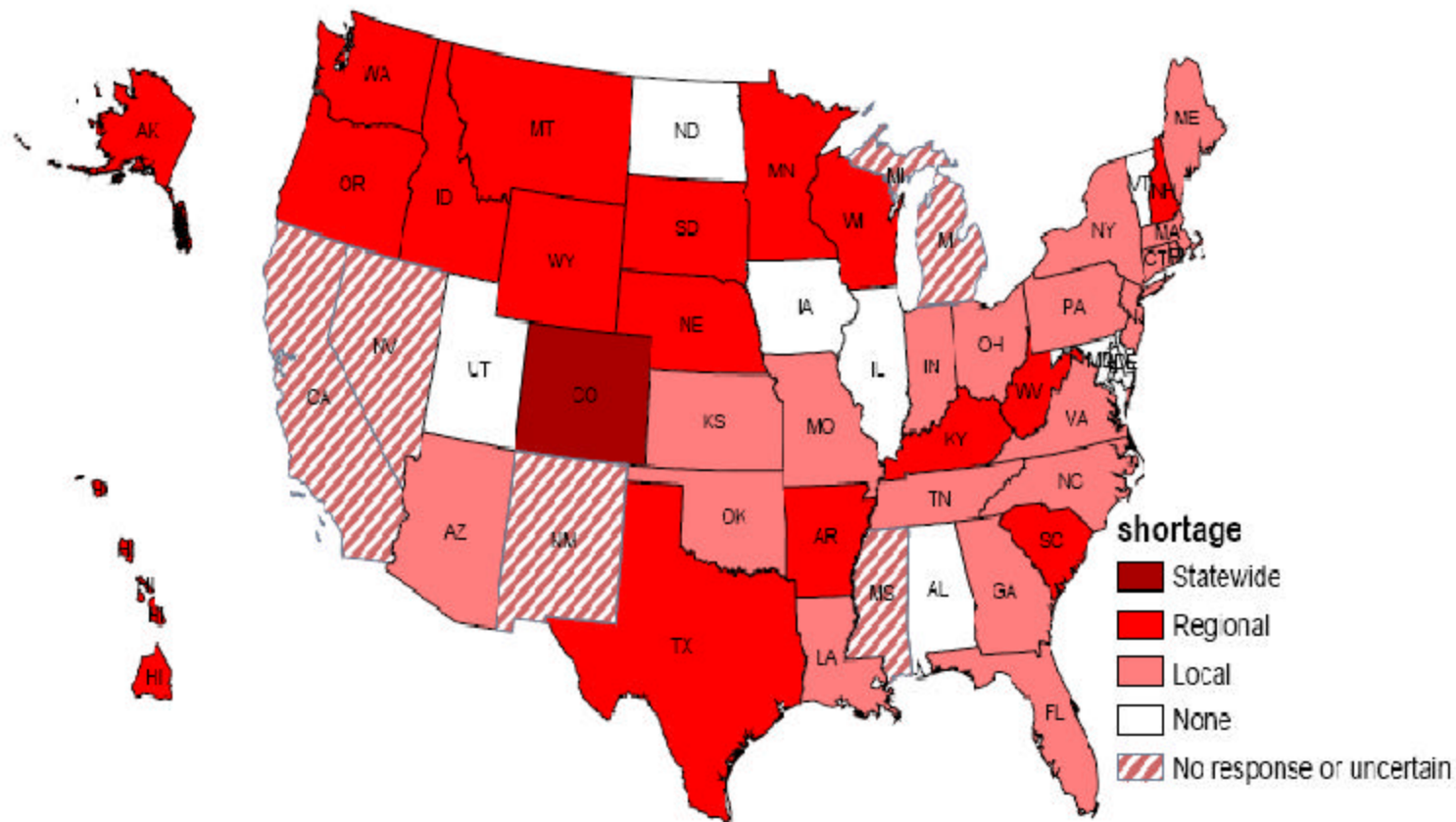


Figure IV-1. Survey of Likely Water Shortages over the Next Decade under Average Conditions (GAO, 2003)

Water Use (Data and Trends)

- U.S. population expected to grow from 309M to 346M by 2025
U.S. Census Bureau (2010)
 - NC population has grown to 9.4M (original 2025 estimate). Growth for 2025 now projected to be 11.6M
 - MD population is projected to grow from 5.7M to 6.6M by 2025
- VA population expected to grow from 7.9M to 8.7M by 2025
U.S. Census Bureau (2010)
 - 800k people require additional 6.08B gal/mo water for domestic use
 - Expanding energy generation by 246M kWh/mo for 800k people requires additional 5.7-9.8 B gal/mo of water
- The influence of drought is unpredictable



Overview

- Water Use in Virginia
- A Short History of Virginia Common Law
How did we get here?
- Current Water Regulation in Virginia

Water Law (History)

- 1795-1750 B.C. – King Hammurabi of Babylonia developed first written laws of water to manage irrigation in dry conditions of Mesopotamia
 - Duty of caution – damage to crops from negligent irrigation requires compensation
 - Recognition that irrigation provides food, wealth and economic development

Influence of Code of Hammurabi
- 528 A.D. – Roman Emperor Justinian I orders the compilation of all Roman laws spanning 13 centuries, including waters laws
 - First written evidence of water being governed as a common resource for public benefit
 - First written evidence of riparian rights
 - Recognition that irrigation provides food, wealth and economic development

Influence of Justinian Code
- 1586 – English settlements in American introduce English Common Law
 - Body of law premised on judicial precedent rooted in Justinian Code
 - Introduction of Crown Grants to promote commerce and economic development
 - Crown operated under *jus publicum* principles (government power benefits the public)

Influence of English Crown law

Water Law (History)

- History and English common law has influence over Virginia water law even today
- First Crown Grants in Virginia (i.e. charters, patents) were given by King James in Virginia on April 10, 1606
 - Instruction that *"the colony be governed as near to the common laws of England, and the etiquette thereof"*
 - Language in Crown Grants varies, but generally recognizes riparian use is subject to "common" rights



King James I (1566-1625)

Water Law (History)

- 1667 – Mills Act in Virginia promotes commerce and economic development
Influence of Commerce
- 1776 - Independence of Virginia results in transfer of political power and sovereignty over land and resources from the Crown to the General Assembly “in trust for all the people of the State.”
Influence of the American Revolution
- 1798 – Courts begin legacy of American common law supporting state sovereignty over water for navigable streams, commerce and public benefit. Courts also depart from English Riparian Doctrine to meet needs of a developing Commonwealth
Era of American Common Law Development
- 1886 – Federal River and Harbor Act passed by Congress (Recodified in 1899 as the Rivers and Harbors Act)
Clear authority for federal protection of navigation and commerce for the public
- 1931 – Virginia State Commission on Conservation and Development publishes first scholarly treatise to understand history and regulation of water in Virginia (Embrey, Waters of the State)
First indication VA water supply and legal framework may not be sustainable over time

Water Law (History)

- 1946 - First comprehensive codification of water law in Virginia and creation of the State Water Control Board (VA is one of the first states to address water quality impairment)

Beginning of water supply regulation and administration in Virginia

- 1948 – Congress passes the Federal Water Pollution Control Act
- 1970 – U.S. Environmental Protection Agency is created
- 1972 – Federal Water Pollution Control Act is amended significantly
- 1977 – The Federal Water Pollution Control Act is reauthorized and amended again (Clean Water Act)

Federal government catches up to Virginia

Overview

- Water Use in Virginia
- A Short History of Virginia Water Resources
- Current Water Regulation in Virginia
 - Will our legal framework support future needs?
 - Surface Water Withdrawals
 - Ground Water Withdrawals

Virginia Water Law (Riparian Withdrawals)

- The term “riparian rights” traditionally refers to common law benefits that accrue to the owner of land adjacent to water: (Scott v. Burwell's Bay)
 - Right to benefit from the advantages conferred upon the land by its proximity to water;
 - Right of access to the water and a right of way to the navigable channel (§28.2-630);
 - Right to build a pier to navigable water, subject to state regulation (§28.2-630);
 - Right to accretions or alluvium;
 - Right to make reasonable use of the water;
 - Increased use of water generally requires a change in use of the riparian land.
- §62.1-104 states “Riparian land is land which is contiguous to and touches a watercourse. It does not include land outside the watershed of the watercourse. Real property under common ownership and which is not separated from riparian land by land of any other ownership shall likewise be deemed riparian land.”

[Chptr. 8 – Impoundment of Surface Waters]

Virginia Water Law (Riparian Withdrawals)

- Riparian withdrawals are premised on *reasonable* use and arose in an agrarian society with little population
- Virginia common law has both evolved and departed from original Riparian Doctrine to accommodate growth of the Commonwealth
 - VA riparian right is a vested property right, has value and is severable (Thurston)
 - VA right is usufructuary – the right to use of common water so long as it is not materially impaired in quantity or quality (Correlative Rights)
 - VA right sometimes has an associated Crown Grant instrument
 - VA right may be lost by adverse possession or prescription
 - Localities/utilities can exercise eminent domain and condemn riparian rights for diversion beyond riparian land (??15.2-2604, 33.1-89, 56-49, 56-347, *et seq*)

Virginia Water Law (Riparian Withdrawals)

- How might a Virginia court decide . . .

- Could a PWS facility use eminent domain to sever a water right from riparian land to provide water service to non-riparian land? (Purcellville)

Yes. Riparian property rights may be condemned similar to other property rights. The condemned water may then be used for PWS. Eminent domain trumps riparian rights.

- Could an IBT occur under Virginia's Riparian Doctrine? (Purcellville)

It depends on who is initiating the IBT – a private or public party? Withdrawal and discharge must generally occur in the same watershed so that downstream riparian users are not affected. However, a PWS facility could exercise eminent domain for the IBT.

- Could a Riparian user challenge a VWP withdrawal or VPDES discharge that unreasonably impairs their use of water? (Crutchfield)

Yes. The decision to issue a VWP permit would have to interfere with reasonable use. DEQ issues VWP permits based on an accounting of all withdrawals in a particular watershed with a goal that riparian and permitted users can coexist. Under VPDES, a similar outcome applies. DEQ conducts UAAs and develops water quality standards that acknowledge the riparian users. However, the process is only as good as what riparian uses are reported and does not contemplate changes in the riparian use.

Virginia Water Law (Riparian Withdrawals)

- State Water Control Law Preserves Riparian Doctrine in Limited Areas:
 - ?62.1-44.44 states “Nothing in **this chapter** shall be construed as altering, or as authorizing any alteration of, any existing riparian rights or other vested rights in water or water use.” [Chptr. 3.2 – Conservation of Water Resources and State Water Control Board; SWSPAC]
 - ?62.1-82 states “The control and regulation on the part of the Commonwealth of the development of the waters of the Commonwealth shall be paramount, and shall be exercised through the agency of the State Corporation Commission, sometimes in this chapter referred to as the Commission; provided, however, nothing contained in **this chapter** shall deprive any riparian owner of any right which he may have, under existing law, except by due and further process of law upon the exercise of eminent domain and upon the payment of just compensation for any such right.”
[Chptr. 7 – Water Power Development]
 - **Statute restates current common law**

Virginia Water Law (Riparian Withdrawals)

- State Water Control Law Preserves Riparian Doctrine in Limited Areas:
 - ?62.1-253 states “Nothing in this chapter shall be construed as altering, or as authorizing any alteration of, any existing riparian rights except as set forth in permits issued pursuant to this chapter. The conditions in such permits shall be in force only in those times when low stream flows, or the potential therefore, result in a declaration as provided for in subsection A of ?62.1-249.”
[Chptr. 24 Surface Water Management Areas]
 - Not clear from the statute if riparian rights are subject to permitting or if permits to others can impair the quality or quantity of riparian rights
 - ?62.1-44.2 to 62.1-44.34:28 embodies the SWCL and DEQ permitting authority. Noticeably absent is any reference to riparian rights, except in the Notice section at ?62.1-44.15:4. [Chptr. 3.1 State Water Control Law]
 - Does VPDES/VWP permitting authority trump the Riparian Doctrine? Statutory programs will likely overwhelm riparian rights. What VA law does not contemplate is that we have two systems of law regulating water that will likely result in the extinguishment of riparian rights through permitting under the VWP/VPDES programs.

Virginia Water Law (Riparian Withdrawals)

- It's all good . . . We've always done it this way!
 - We've been doing it this way since 1586 - Maybe things have changed . Although the doctrine may have been responsive to the needs of riparians for a period in our history, it is not responsive to modern water use patterns , demand and management
 - The riparian right is neither quantified nor fixed in time, resulting in uncertainty and limitation on use of riparian lands, permitted uses and planning for economic development
 - During drought, it's virtually impossible to manage the resource where the number of reasonable uses can exceed the capacity of the water resource
 - No accounting for transfer or new use of riparian rights
 - Water right is premised on land ownership rather than actual use, resulting in inefficient allocation
 - What is reasonable use today may be unreasonable tomorrow, resulting in complex litigation where there is no *res judicata*

Virginia Water Law (Riparian Withdrawals)

- Wait! There's more . . .

- Some states have established priority among riparian users (i.e. domestic use comes first), but not in Virginia
- Riparian doctrine does not recognize need for minimum flow, potentially resulting in destructive withdrawal practices
- Water quality requirements cannot be assured – cumulative effects of reasonable withdrawals can result in reduced flow and loss of assimilative capacity
- Riparian landowners can challenge VWP and VPDES permits, but are subject to complex litigation, costs, legal scrutiny, no *res judicata* and growing public policy sympathetic to equitable public resource management
- Where their rights are at risk, plaintiff riparian landowners may prefer to challenge other riparian landowners using "reasonable use" standard instead of challenging the SWCB under an "arbitrary and capricious" standard
- Attempts by judiciary to modify Riparian Doctrine have resulted in further confusion

Virginia Water Law (Riparian Withdrawals)

- The legal framework for riparian landowners is probably not sustainable and also precludes comprehensive resource planning
- What if all riparian withdrawals “really” had to register and report?

Advantages

- Defines the riparian right for the landowner
- Protects the riparian right
- Improves resource accountability
- Improves resource allocation efficiency
- Reduces conflict and litigation
- Provides continuity and predictability to the riparian landowner, correlative rights and permitted users where the courts cannot
- Improves economic development

Disadvantages

- Defines the riparian right for the landowner
- Improves resource accountability
- State agency manages the resource
- Registration and reporting may lead to evidence of over allocation in some areas

Virginia Water Law (Surface Water Withdrawals)

- VWP permit is required for surface water withdrawals

However, no permit is required for some types of withdrawals, including:

- Withdrawals in existence on July 1, 1989 do not require a VWP permit unless a ?401 certification is required to increase the withdrawal (? 62.1-44.15:22)
 - Withdrawals for agriculture that are less than 1M gpm (9VAC25-210-30.B)
 - Withdrawals for all other purposes that are less than 10K gpd (9VAC25-210-30.B)
- Number of withdrawals exempt from VWP permitting is unknown

Virginia Water Law (Surface Water Withdrawals)

- Withdrawal permit required in a Surface Water Management Area (SWMA)
However, no permit is required for some withdrawals:
 - Outside a SWMA unless VWP program applies (? 62.1-243.A)
 - Withdrawals less than 300,000 gpm (? 62.1-243.A)
 - Nonconsumptive uses (? 62.1-243.A)
 - Withdrawals in existence on July 1, 1989 unless the withdrawal increases (? 62.1-243.C)
 - Withdrawals with a ?401 certification, unless the withdrawal increases (? 62.1-243.A)
 - Locality and water company withdrawals in existence on July 1, 1989 unless the withdrawal increases (? 62.1-243.B)
 - “Nothing in this chapter shall be construed as altering or authorizing any alteration of any existing riparian rights except as set forth in permits issued pursuant to this chapter.” (? 62.1-253)
- Currently no SWMAs

Virginia Water Law (Ground Water Withdrawals)

- Withdrawal permit required in a GWMA (? 62.1-258)

However, no permit is required for some types of withdrawals, including:

- Outside a GWMA (? 62.1-259; 9VAC25-610-50)
- Withdrawals less than 300,000 gpm (? 62.1-259; 9VAC25-610-50)
- SWCB “shall” re-issue permits for existing GW withdrawals in the same amount as that withdrawn during any consecutive twelve-month period between July 1, 1987 and June 30, 1992 that includes such savings as can be achieved from water conservation (? 62.1-260; Grandfathering)
 - Localities get larger reference term from July 1, 1980 to June 30, 1992 (? 62.1-260)
 - Similar grandfathering applies to other withdrawals, including non-permitted withdrawals for agricultural or livestock watering (? 62.1-260 to 261)
- Number of withdrawals exempt from permitting is unknown

Virginia Water Law (Ground Water Withdrawals)

- No permit is required from DEQ outside of a GWMA
 - Common law principles of reasonable use apply
 - Consistent with Riparian Doctrine with some distinctions
 - Similar problems and concerns as Riparian Doctrine
 - VA courts even more confused over common law regulation of ground water because of distinctions between “percolating” and “channel” ground water
- A permit may be required by VDH, depending on the use, but VDH does not regulate supply
- Number of withdrawals exempt from permitting is unknown

Virginia Water Law (Ground Water Withdrawals)

- VDH authority over ground water withdrawals under the Virginia Private Well Construction Act
 - "Private well" means any well that, "is usually intended for household, ground water source heat pump, agricultural use, industrial use or other nonpublic water well" (? 32.1-176.3)
 - Any new well or the repair of an existing well requires a VDH permit (? 32.1-176.5)
 - Ensures protection of public health and ground water quality for drinking wells
 - Permit may also be required from DEQ if well is in a GWMA
 - Well completion reports provided to DEQ pursuant to MOA for accountability
- Number of private wells is not fully reported

Virginia Water Law (Registration and Reporting)

Why is permitting and reporting limited?

- VA water law premised on preserving historic uses rather than effective management to prolong and optimize the resource
- Current requirements for registration and reporting for riparian, grandfathered and other unknown withdrawals is not enforceable:

“The Board may, by regulation, require each water user withdrawing surface or subsurface water or both during each year to register, by a date to be established by the Board, water withdrawal and use data for the previous year including the estimated average daily withdrawal, maximum daily withdrawal, sources of water withdrawn, and volume of wastewater discharge, provided that the withdrawal exceeds one million gallons in any single month for use for crop irrigation, or that the daily average during any single month exceeds 10,000 gallons per day for all other users.”

[Conservation of Water, Chptr. 3.2 at ? 62.1-44.38.B; 9VAC25-610-50]

Questions?

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Suggested Sources for Additional Information

- EPA Water Resources: <http://www.epa.gov/climatechange/effects/water>
- USGS Water Science: <http://water.usgs.gov>
- Virginia Tech Water Resources Research Center: <http://www.vwrrc.vt.edu>
- National Institute of Water Resources: <http://snr.unl.edu/niwr/default.asp>
- Water Footprint Network: <http://www.waterfootprint.org>
- DOE National Energy Technology Laboratory: <http://www.netl.doe.gov>